1.	A storage management device for exchanging data between a plurality of computer users and a plurality of storage devices, the storage management device comprising:

one or more control modules, each having one or more first data ports;

one or more storage control modules, each having one or more second data ports;

one or more data stores;

a switch fabric configured to selectively exchange data among said first data ports and said second data ports, some of said first data ports and said second data ports receiving and transmitting data with said computer users, others of said first data ports and said second data ports receiving and transmitting data with said storage devices;

first program code adapted to execute on each of said one or more control modules; and

second program code adapted to execute on each of said one or more storage control modules,

said first program code comprising:

a first code component configured to operate one of said control modules to issue a request for device information;

a second code component configured to operate one of said storage control modules to receive said request for device information and in response thereto to obtain device information corresponding to one or more of said one or more storage devices, said device information being stored in said one or more data stores; and

a third code component configured to operate one of said control modules to receive said device information and in response thereto to initialize, characterize, and profile said corresponding storage devices.

2.	The device of claim 1 wherein said one or more storage control modules each includes a plurality of storage processing units, each of said storage processing units comprising one or more of said second ports, said second code component comprises:

a first code portion configured to operate one of said storage control modules to receive said request for device information and in response thereto to communicate said request to each storage processing unit; and

7   a second code portion configured to operate one of said storage processing

8 units to receive said request and in response thereto to communicate via said one or more of

9 said second ports to obtain said device information.

1   3. The device of claim 1 wherein said second code component is further

2 configured to operate one of said storage control modules to obtain path information, said

3 path information identifying data paths between said second data ports and said storage

4 devices, said path information being stored in said one or more data stores.

1   4. The device of claim 3 wherein said second code component is further

2 configured to operate one of said storage control modules to detect changes in said path

3 information, said changes in said path information being stored in said one or more data

4 stores.

1   5. The device of claim 1 wherein said second code component is further

2 configured to operate one of said storage control modules to detect addition of a storage

3 device.

1   6. The device of claim 5 wherein said second code component is further

2 configured to operate one of said storage control modules to detect removal of a storage

3 device.

1   7. The device of claim 1 wherein said second code component is further

2 configured to operate one of said storage control modules to detect addition of one or more

3 data coupling devices, said data coupling devices effective for providing a data

4 communication between some of said first and second data ports and some of said storage

5 devices.

1   8. The device of claim 7 wherein said second code component is further

2 configured to operate one of said storage control modules to detect deletion of one or more of

3 said data coupling devices.

1   9. The device of claim 1 wherein said device information includes one or

2 more of reliability information, availability information, a failover policy, command support

3 capability, and performance information.

1   10.   The device of claim 1 further including a fourth code component
2   configured to operate one of said control modules to receive user-provided information
3   relating to a configuration of virtual storage devices and to associate said storage devices to
4   said virtual storage devices based on said device information, wherein each device can be
5   associated with one or more of said virtual devices, wherein each virtual device can be
6   associated with one or more of said devices.

1   11.   In a storage management device for exchanging data between a
2   plurality of computer users and a plurality of physical storage devices, the storage
3   management device comprising a plurality of first data ports configured for communication
4   with said computer users, a plurality of second data ports configured for communication with
5   said physical storage devices, and a switch fabric configured to selectively exchange data
6   among said first data ports and said second data ports, a method of managing said physical
7   storage devices comprising:
8   communicating a request for device information;
9   obtaining device information corresponding to said physical storage devices;
10   based on said device information, initializing said corresponding physical
11   storage devices;
12   identifying a plurality of first communication paths between said storage
13   management device and said physical storage devices;
14   storing in one or more data stores said device information and path
15   information indicative of said first communication paths;
16   receiving user-provided information relating to a virtual storage configuration;
17   and
18   based on said device information and said path information, associating one or
19   more of said physical storage devices to said virtual storage configuration.

1   12.   The method of claim 11 wherein said device information includes one
2   or more of reliability information, availability information, a failover policy, command
3   support capability, and performance information.

1   13.   The method of claim 11 further including detecting changes in said
2   first communication paths and storing information indicative of said changes in said first
3   communication paths in said one or more data stores.

1 14. The method of claim 11 further including detecting addition of a new
2 physical storage device to said physical storage devices and removal of one of said physical
3 storage devices and storing said addition in said one or more data stores.

1 15. The method of claim 11 further including detecting addition of a first
2 data coupling device for coupling said storage management device to one or more of said
3 physical storage devices and removal of a second data coupling device and storing said
4 removal in said one or more data stores.

1 16. The method of claim 11 further including receiving user-provided
2 information relating to a configuration of virtual storage devices; and associating said
3 physical storage devices to said virtual storage devices based on said device information and
4 said first communication paths, wherein each physical device can be associated with one or
5 more of said virtual devices, wherein each virtual device can be associated with one or more
6 of said physical devices.

1 17. A storage management device for exchanging data between a plurality
2 of computer users and a plurality of physical storage devices comprising:
3 a plurality of first data ports configured for communication with said computer
4 users;
5 a plurality of second data ports configured for communication with said
6 physical storage devices;
7 a switch fabric configured to selectively exchange data among said first data
8 ports and said second data ports;
9 one or more data stores;
10 means for communicating a request for device information;
11 means for obtaining device information corresponding to said physical storage
12 devices and for storing said device information in said one or more data stores;
13 means for characterizing and profiling said physical storage devices based on
14 said device information;
15 means for initializing said corresponding physical storage devices based on
16 said device information;

17   means for identifying a plurality of first communication paths between said

18   storage management device and said physical storage devices and for storing information

19   indicative of said first communication paths in said one or more data stores; and

20   means for detecting changes in a topology of said physical storage devices and

21   for storing said changes.

1   18.   The device of claim 17 further including means for receiving user-

2   provided information relating to a configuration of virtual storage devices; and means for

3   associating said physical storage devices to said virtual storage devices based on said device

4   information and said path information, wherein each physical device can be associated with

5   one or more of said virtual devices, wherein each virtual device can be associated with one or

6   more of said physical devices.

1   19.   The device of claim 17 wherein said changes in a topology of said

2   physical storage devices includes addition of one or more new physical storage devices and

3   removal of one or more of said physical storage devices.

1   20.   The device of claim 17 wherein said device information includes one

2   or more of reliability information, availability information, a failover policy, command

3   support capability, and performance information.